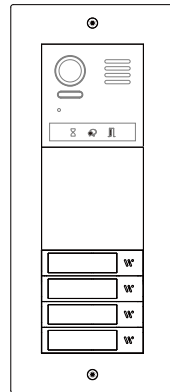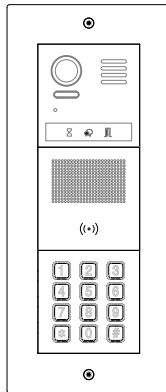## English

DT821 Door Station

2-wire Fisheye Camera
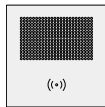### Modularity Outdoor Station

Quick Installation Guide
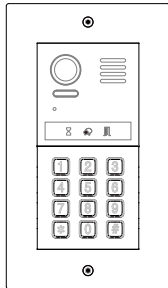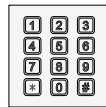
821-VD	821-AD	821-DR	821-MK	821-S4

821-TFT	821-LB	821-BL	821-S0

1. Parts and Functions

Speaker
Fisheye Lens
Night View LED
Microphone
Status Indicator
Dot-matrix Display
Card Reader Window
821-MK Modular
Screw Hole

Connection Port
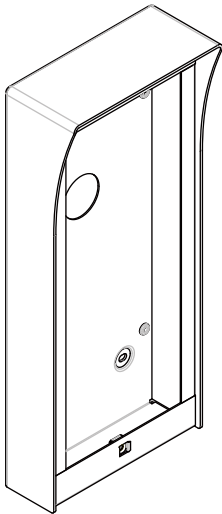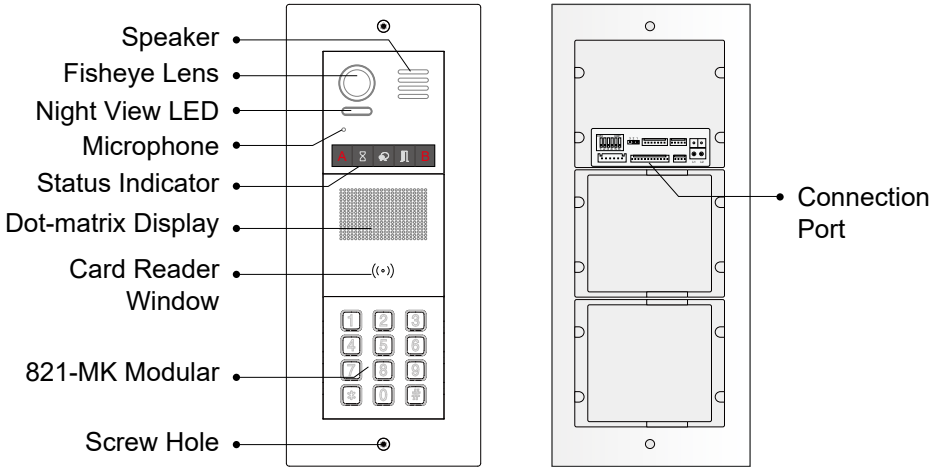
Surface mount box

Embedded box

Front panel

Note:Key A and key B will not be seen on the panel,they are cryptic.About activating key A and key B, please refer to the user manual.

2. Terminal Description
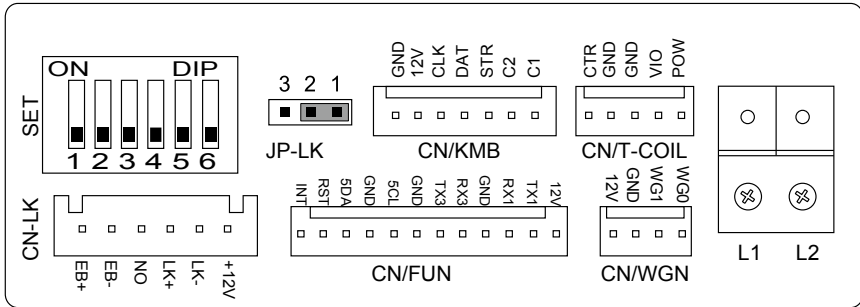
- **+12V:** 12VDC power output.
- **LK-:** power ground.
- **LK+:** common contact of the relay.
- **NO.:** normally open contact of the relay(refer to DT technical guide for Lock connection detail informations).
- **EB+:** exit button positive connection port.
- **EB-:** exit button negative connection port.
- **JP-LK:** for electronic lock safety type setting (refer to door lock connections).
- **SET :** DIP switches for system configurations.
- **CN/KMB:** call button module connection port.
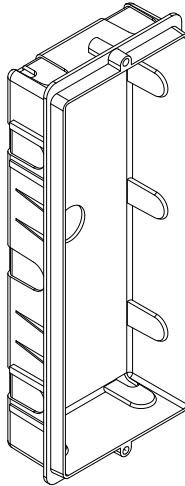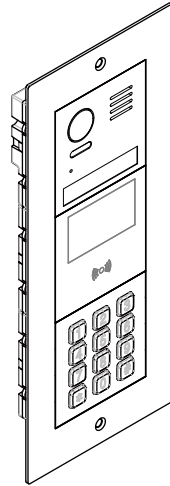- **CN/T-COIL:** reserved.
- **CN/FUN:** Mechanical keypad module or TFT display module connection port.
- **CN/WGN:** Card reader module connection port.
- **Bus(L1,L2):** non-polarity bus line,connect to PC6B(power comb unit).

3. Specification

Power supply:	24Vdc(supplied by PC6B)
Camera:	1/2.7'' fisheye camera,170° wide angle
Power Consumption:	1W in standby
	5W in working
Card Reader:	Support 125KHz and 13.56MHz unencrypted RFID tag
Unlock Power output:	12Vdc,250mA

Unlock timing:	1~99s
Working temperature:	- 20ºC ~ +55ºC
Wiring:	2 wires (non-polarity)
Dimension:	316(H)×133(W)×48(D)mm(3 GANG)
	232(H)×133(W)×48(D)mm(2 GANG)

4. Mounting

Flush mounting

① Drill a hole and attach the embedded box to it.

② Wire correctly and plug in the bus line connector

③ Use the screws to fasten the panel

④ The last view for all mounting.

Surface mounting

① ② ③ ④

5. VD Module

Speaker
Camera lens
Night view LED
MIC
Invisible key B
Invisible key A
Status indicator
Talk indicator
Unlock indicator
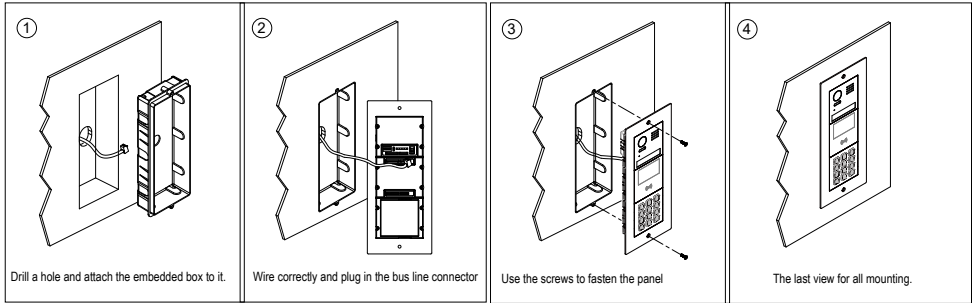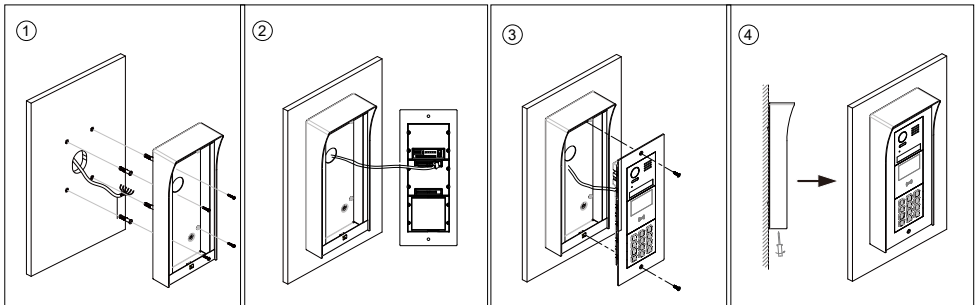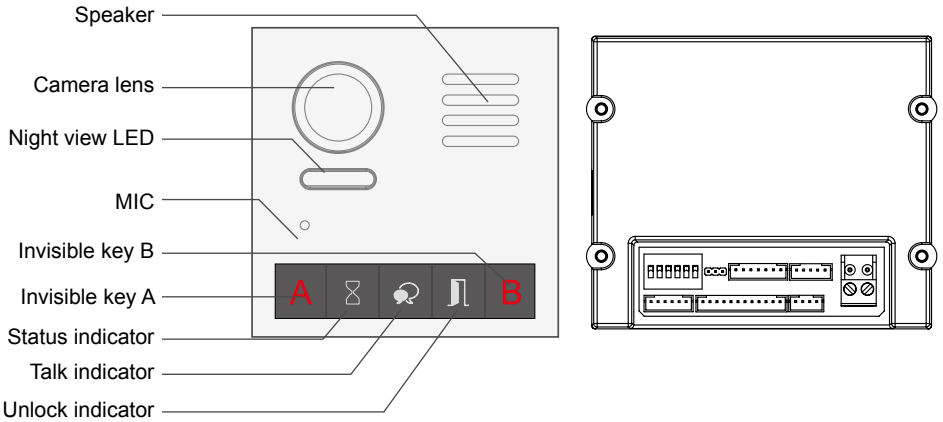
Note: Key A and key B can not be seen on the panel, they are cryptic.

(1) DIP Switches Settings

Totally 6 bits can be configured by dip-switch. All switches can be modified either before or after installation, please restarting the power whenever the switches have been modified.
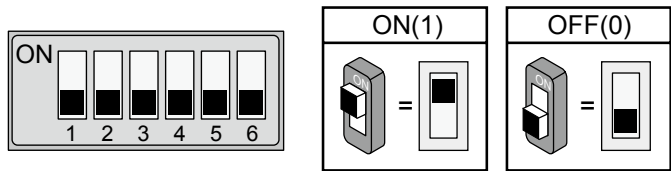
- **Bit-1 and Bit 2 are used for door station ID settings.** When multi door stations are in-stalled in the system, these two bits must be set correctly, the first door station set to 00, the second one set to 01, the third one set to 10, the fourth one set to 11. If only one door station is installed, set to 00.
- **Bit-3 is used for single or double row button door station selection.** If the door sta-tion is a double row button, set this bit to 0. For single row button door station,set to 1.

- **Bit-4 is used for button code selection.** If use the default codes for each button of the door station, set to 0. If use the programmed codes, set to 1.(the code for each button can be programmed by software, detail information refer to DT system technical guide)
- **Bit-5 is used for unlocking time setting.** 0 is the default setting,and the default time is 1 second. If set to 1,the unlock time is 5 seconds(the unlock time can be modified by door station or software)
- **Bit-6 is used for activating the key A and key B.** Normally key A and key B is not activated(about the functions of key A and key B,please refer to DT system technical guide), Just when power up to the module, and the bit-6 is set to 1, the key A and key B is activated.

(2)Settings via touch button

A). Please know that the Bit-6 switch must be set to OFF, then power up to the module, and then the Bit-6 set to ON to carry on the following settings.

• *Unlocking Mode Setting*

When the door station with **Camera Module** is in standby.

(1)Press Key A, the **Unlock indicator** turns on with the warning sound of BP+, BP;

(2)Press Key A again to set the **Unlocking Mode** to **Normally On** or **Normally Closed**. (**Normally On**: the **Status indicator** blinks for one time with the warning sound of BP+; **Normally Closed**:the **Status indicator** blinks for twice with the warning sound of BP+, BP).

If **TFT Module** is connected, the info will be displayed on screen.

• **Unlocking Time Delay Setting**

When the door station with **Camera Module** is in standby.

(1)Press Key A, the **Unlock indicator** turns on with the warning sound of BP+, BP;

(2)Press Key B and hold on to enter the **Unlocking Time Delay Setting**, a warning sound of BP will be heard and the **Status indicator** blinks one time per second.

The counting of **Unlocking Time** is the times that **Status indicator** blinks(the units is second). For example,the **Status indicator** blinks for four times,that means the unlocking time is 4 seconds.

• **Warning Tune Setting**

When the door station with **Camera Module** is in standby.

(1)Press Key A and hold on for 3 seconds to enter the **Warning Tune Option Mode**, the **Status indicator** turns on and the current tune is playing;

(2)Press Key A again to play next tune;

(3)Press Key B to quit.

• **Tune Volume Setting**

When the door station with **Camera Module** is in standby.

(1)Press Key B to enter **Tune Volume Setting**, the **Talk indicator** turns on,at the same time, play the tune at current volume;

(2)Press Key A to increase/decrease the volume;

(3)Press B to exit.

If **TFT Module** is connected, the current **Volume** will be displayed on screen.

- *Talk Volume Setting*

(1)During conversation, press Key B and hold on for 3 seconds to enter the **Talk Volume Setting**, The **Talk indicator** turns on with the warning sound of BP+,BP;

(2)Press Key A to increase/decrease the volume.

(3)Press Key B to exit.

B). Please know that the Bit-6 switch must be set to ON, then power up to carry on the following settings.

- *Camera N / P Standard Switch*

When the door station with **Camera Module** is in standby.

(1)Press Key A, the **Talk indicator** and **Status indicator** turns on with the warning sound of BP+, BP;

(2)Press Key A again to enter the **Camera N/P Standard Switch** setting. (**P Standard**: the **Status indicator** blinks for one time with the warning sound of BP+; **N Standard**: the **Status indicator** blinks for twice with the warning sound of BP, BP).

• *Enable/Disable Image Zoom Mode*

When the door station with **Camera Module** is in standby.

(1)Press Key A, the **Talk indicator** and **Status indicator** turns on with the warning sound of BP+, BP;

(2)Press Key B to enter the **Enable/Disable Image Zoom Mode** setting. (**Enable Image Zoom Mode**: the **Talk indicator** blinks for one time with the warning sound of BP+; **Disable Image Zoom Mode**: the **Talk indicator** blinks for twice with the warning sound of BP, BP).
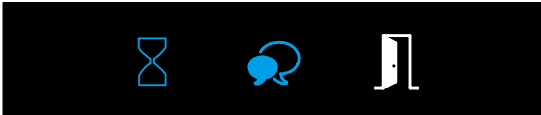
* If enable image zoom mode, when the monitor being called, the image will be displayed on full screen for 5 seconds, then switch to Zoom image.

C). Please know that whether switch 6 is turned on or off, then power up to carry on the following settings.

• *Monitor online detection function*

Note that this function needs to be used with M4 module.

When the door station with **Camera Module** and **M4 Module** are in standby.

(1)Press and hold Key B, if the monitor online, the key indicator of M4 module lights up in turn with the warning sound of BP+, BP; If it is not online, the indicator light is not on.

(2)System will exit automatically after detection.

6. MK Module

Mechanical keypad

Connect to main or last module

Connect to next module

IN
OUT
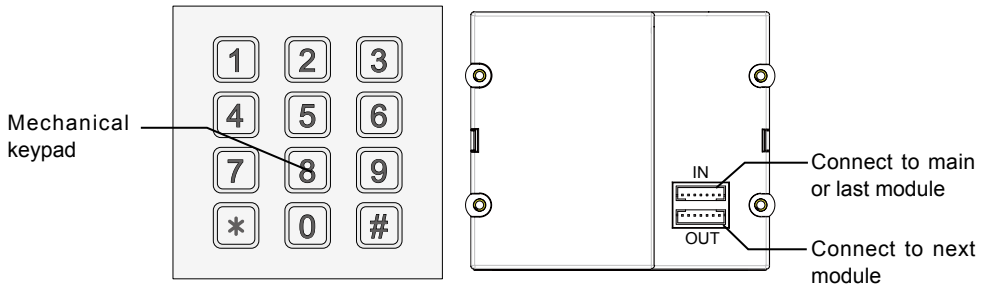
Parameters Setting

This section explains the settings of each function, please refer to the following table:

About the setting mode:

Input the master code to switch to the setting mode, and input the corresponding setting code to perform the settings for the function you want. After settings have been made, input the following setting codes to continue the setting operation. Press " ⁎ " to exit the setting mode.

- The example is set ⁎ as cancel button and # as confirm button,please refer to */# function setting for detail information.
- You should press"confirm"button after finish inputting the code number each time,otherwise,the operation will be cancelled automatically in 10s.

Setting items	Setting range	Default value	Setting code
Reset all settings	1,2,3,4	-	00
Setting the master code	1 ~ 12 digits Valid keys:0 ~ 9	1234	01

Setting items	Setting range	Default value	Setting code
Setting the key illumination time	10 to 99 seconds/ continually lit	10 seconds	02
Setting the unlock time	01 to 99 seconds	1 seconds	03
Setting the unlock mode	0:opened/1:closed	opened	04
Operation tone settings	0,1,2	on	05
Reset code settings	1,2,3,4	-	06
✳&# function settings	0:Normal/1:Reverse	Normal	07
Call tone settings	0:Enable/1:Disable	Enable	08
SPK Adjustment	Valid keys:0~9	5	11
Night light level	Valid keys:0 ~ 5	4	13
Auto call delay time	Valid keys:0 ~ 5	0	14
Reserve	Reserve	Reserve	15~17
Setting the code forTemporary1	1 ~ 12 digits Valid keys:0~9	-	18
Setting the code forTemporary2	1 ~ 12 digits Valid keys:0~9	-	19
Setting the code for user group1	1 ~ 12 digits Number of codes:40 Valid keys:0~9	-	20~59
Setting the code for user group2	1 ~ 12 digits Number of codes:40 Valid keys:0~9	-	60~99

Input the master code.
(Default:[#][1 2 3 4] +[#])

Beep+, Beep

| 1.Reset all settings | 2.Setting the master code (Default：1234) | 3.Setting the key illumination time (Default：10s) | 4.Setting the unlock time (Default：1s) |

Input the setting code.

00+#

Beep+, Beep

Input the setting code.

01+#

Beep+, Beep

Input the setting code.

02+#

Beep+, Beep

Input the setting code.

03+#

Beep+, Beep

Inputting of code

#+1234+#

Beep+

Inputting of new master code
(ex.: 4321)(1~12 digits)

4321+#

Beep+

Inputting of code (ex.: 10)
range:00 or 10~99

10+#

Beep+

Inputting of code (ex.: 09)
range:01~99

09+#

Beep+

- When the "＊cancel" key is pressed, the indicator will show its standby color, the buzzer beeps, and the system
  exits the setting mode.
- When there isn't any operation in 10s, the buzzer beeps, and the system exits the setting mode.
- When setting failure, the buzzer beeps.

Beep, Beep+

- All settings will restore to their default value.
- When power on or activate the reset all setting item,the keypad checking will carry out, during this time,the key illumination will blink and the touching operation is forbidden, after finish checking,the key illumination will stop blinking and sent out a long sound of beep

- The master code is allowed 1~12 digits,the same code cannot be set for both the user code and the master code,it is recommended that you modify the default master code.

- If the key illumination time is set to 00,the key illumination will light up all the time when power on.
- If the key illumination time is set to 10~99,the key illumination will light up for 10~99 seconds.At this mode, the key illumination lights off in standby mode, touching any digital key can illuminate,but this is the invalid digital.

- The unlock time can be set on both monitor and door station, and the valid value is the number you set last time.

Input the master code. (Default:[#][1 2 3 4] +[#])	Beep+, Beep

5.Setting the unlock mode (Default：0(opened))	6.Setting operation tone (Default：ON)	7.Reset code setting	8.*&# function setting (Default：Normal)
Input the setting code. 04+#	Input the setting code. 05+#	Input the setting code. 06+#	Input the setting code. 07+#
Beep+, Beep	Beep+, Beep	Beep+, Beep	Beep+, Beep
0/1	0/1		0/1
Inputting of code (ex.: 1) range:0:(open)/1:(close) 1+#	Inputting of code (ex.: 1) range:0:(on)/1:(off) 1+#	Inputting of code 1234+#	Inputting of code (ex.: 1) range:0:(normal)/1:(reverse) 1+#
Beep+	Beep+	Beep+	Beep+

- When the " * cancel" key is pressed, the indicator will show its standby color, the buzzer beeps, and the system exits the setting mode.
- When there isn't any operation in 10s, the buzzer beeps, and the system exits the setting mode.
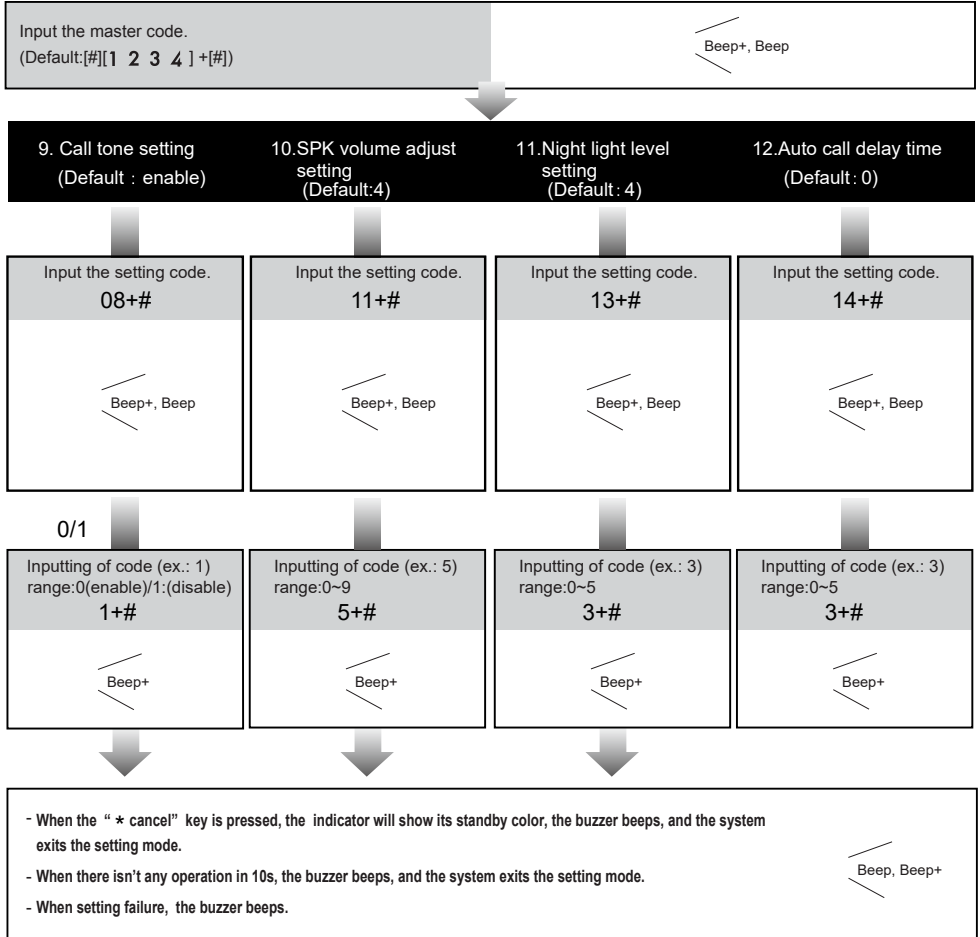- When setting failure, the buzzer beeps.

Beep, Beep+

- The unlock mode can be set on both monitor and door station, and the valid value is the number you set last time.

- When the operation tone is set to 0,pressing the digital keypad will sent out a sound of beep.
- When the operation tone is set to 1,pressing the digital keypad will blink one time.

- Cancel all the passwords except the master code.
- Restore the master code to default value(1,2,3,4)

- When the item is set to 0,press the * button to cancel the input, and press the # button to confirm the input.
- When the item is set to 1,press the # button to cancel the input, and press the * button to confirm the input .

Input the master code. (Default:[#][1 2 3 4] +[#])			Beep+, Beep

9. Call tone setting (Default：enable)	10.SPK volume adjust setting (Default:4)	11.Night light level setting (Default：4)	12.Auto call delay time (Default：0)
Input the setting code. 08+#	Input the setting code. 11+#	Input the setting code. 13+#	Input the setting code. 14+#
Beep+, Beep	Beep+, Beep	Beep+, Beep	Beep+, Beep

0/1

Inputting of code (ex.: 1) range:0(enable)/1:(disable) 1+#	Inputting of code (ex.: 5) range:0~9 5+#	Inputting of code (ex.: 3) range:0~5 3+#	Inputting of code (ex.: 3) range:0~5 3+#
Beep+	Beep+	Beep+	Beep+

- When the "＊cancel" key is pressed, the indicator will show its standby color, the buzzer beeps, and the system exits the setting mode.
- When there isn't any operation in 10s, the buzzer beeps, and the system exits the setting mode.
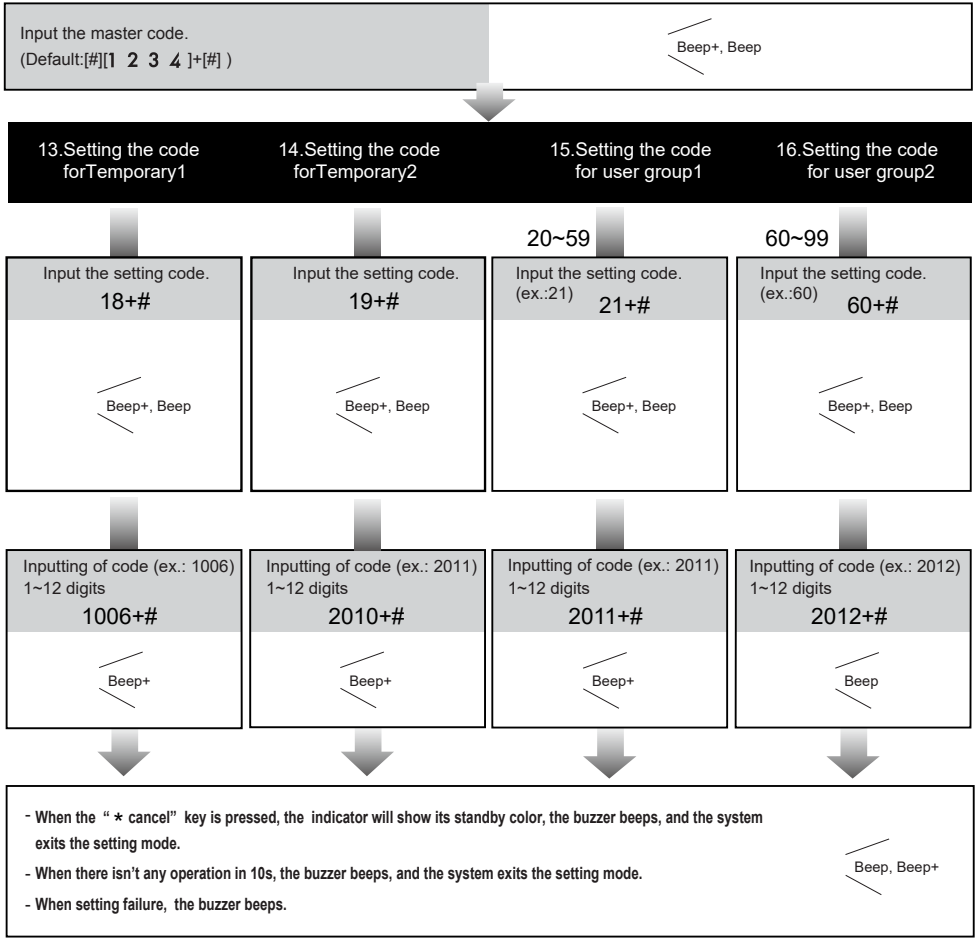- When setting failure, the buzzer beeps.

Beep, Beep+

- If the item is set to 0,the unit will respond a call tone when pressing the "CALL" button.
- If the item is set to 1, the unit will have no responds when pressing the "CALL" button.

- Unlock via password is still available even when the door station is talking.
- When door station is talking, you can enter the Master code (the LED turns white upon that) to activate the volume adjusting function:
＊ Speaker adjustment: 3 (up), 6 (down).

- Night Light Level:0~5.
-The higher the number, the brighter the night lights.

- Auto call delay time Level:0~5.
0 means the function is disabled.

Input the master code. (Default:[#][1 2 3 4]+[#])	Beep+, Beep

13.Setting the code forTemporary1	14.Setting the code forTemporary2	15.Setting the code for user group1	16.Setting the code for user group2
		20~59	60~99
Input the setting code. 18+#	Input the setting code. 19+#	Input the setting code. (ex.:21) 21+#	Input the setting code. (ex.:60) 60+#
Beep+, Beep	Beep+, Beep	Beep+, Beep	Beep+, Beep
Inputting of code (ex.: 1006) 1~12 digits 1006+#	Inputting of code (ex.: 2011) 1~12 digits 2010+#	Inputting of code (ex.: 2011) 1~12 digits 2011+#	Inputting of code (ex.: 2012) 1~12 digits 2012+#
Beep+	Beep+	Beep+	Beep

- When the " ＊ cancel" key is pressed, the indicator will show its standby color, the buzzer beeps, and the system exits the setting mode.
- When there isn't any operation in 10s, the buzzer beeps, and the system exits the setting mode.
- When setting failure, the buzzer beeps.

Beep, Beep+

- When input the correct temporary password to release the door, the system will clear the temporary password after 60 seconds automatically.But you should know that the password is valid within 60 seconds after inputing the correct temporary password
- The temporary1 is used to release the first lock,and the temporary 2 is used to release the second lock(the second lock need external device to support).
- If the password length exceeds 12 digits, the system will sent out the sound of "beep,beep,beep,beep",and the digitals you input before will be cleared at the same time.
- The temporary code can not be set the same as the master code and user code.

- The user code group1 is used to release the first lock,and the user code group2 is used to release the second lock (the second lock need external device to support).
- The user code group1 and user code code group2 can contain 40 group passwords
- If the password length exceeds 12 digits, the system will sent out the sound of "beep,beep,beep,beep",and the digitals you input before will be cleared at the same time.
- The user code can not be set the same as the master code and temporary code.

7. DR Module
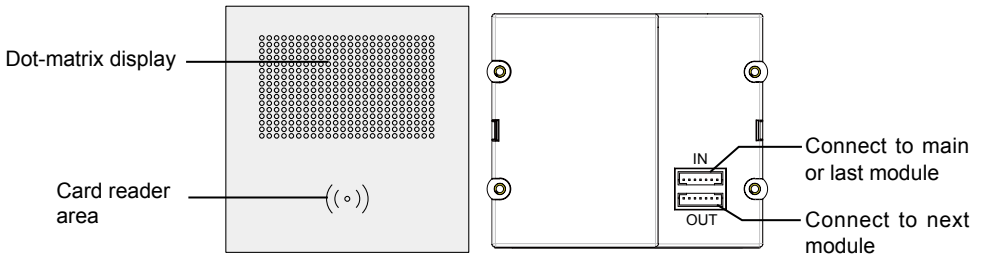
Dot-matrix: 16 x 24 dot matrix display.

Card Reader: support 125KHz and 13.56MHz unencrypted RFID tag.

Features

- Up to 320 user cards can be registered by door station
- Easy management with indicators and sound hints
- The distance of card reading is from 3 to 5 cm
- The **Manage Cards** are necessary when you add or delete user cards. Please keep it well for future use

Card Operation

• Master Card Setting

a. Connect DR module and power up, joint EB+ and EB- on lock connector on VD module, a sound of "BP+" will be sent out.

b. Toggle DIP4 switch for four times on VD module, a sound of "BP+,BP" will be sent out .

c. Show first card on DR module will be new *Manage ADD card*, a sound of "BP+" will be sent out.

d. Show second card will be new *Manage DELETE card*, a sound of "BP+" will be sent out.
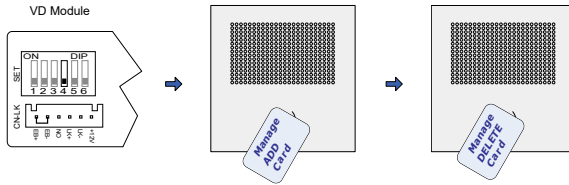
VD Module

• **User Card Setting**

i) Add User Card
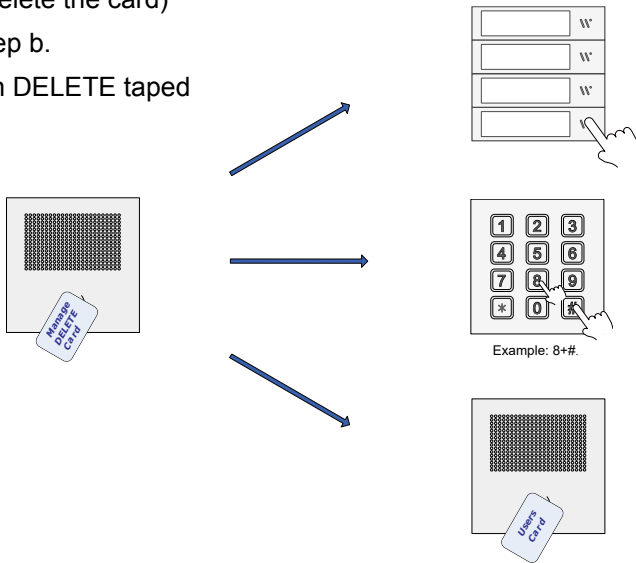
a. In standby mode, show the **Manage ADD Card** on DR module, it will sound "BP+,BP".

b. **S4 module:** Press the room button on S4 module which ID card needs be associate with. (skip if there is no S4 module)

   MK module: Press the room numbers on MK module which ID card needs be associate with, then press " # "to confirm. (skip if there is no MK module)

c.Tap all ID card needs to be added associate with this room

d.Repeat step b and c.

e.Finish with ADD taped.

Example: 8+#.
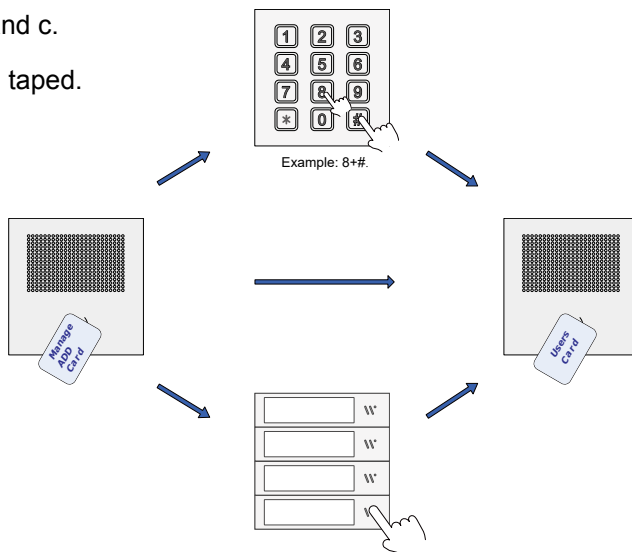
ii) Delete User Card

a. In standby mode, show the **Manage DELETE Card** on DR module, it will sound "BP+,BP".

b. 3 ways to delete card

- Press the room button on S4 module which ID cards relate to this room needs to delete. All ID cards add relate to this room will be delete.
- Press the room numbers on MK module which ID cards relate to this room needs to delete, and then press "#" to confirm. All ID cards add relate to this room will be delete.
- Directly show ID card needed to delete.(if card not add by "press button" procedure, and card need to delete is missing, you will need to format all card data to delete the card)

c. Repeat step b.

d. Finish with DELETE taped

Example: 8+#.

Note that other methods of Add / Delete cards, please refer to the monitor's manual.

iii) Format Card

a. In standby mode, show the **Manage DELETE Card**, it will sound "BP+,BP".

b. Show the **Manage ADD Card**, it will sound "BP+,BP".

c. Show the **Manage ADD Card** again, it will sound "BP", and after 10 seconds, it will return to standby mode and the format is finished.

iv) Backup and Restore

Cards, Pin codes and Namelist could be backup or restore from a backup.

Backup :

When bit6 of DIP is in OFF position on VD module, click a SD card, in 10s long press key A to backup.

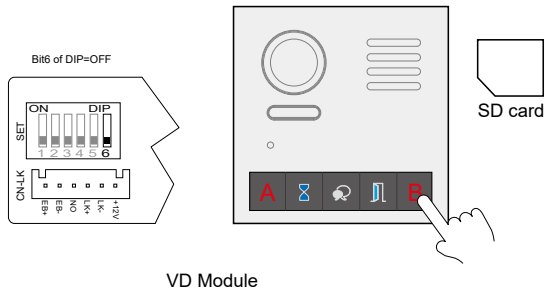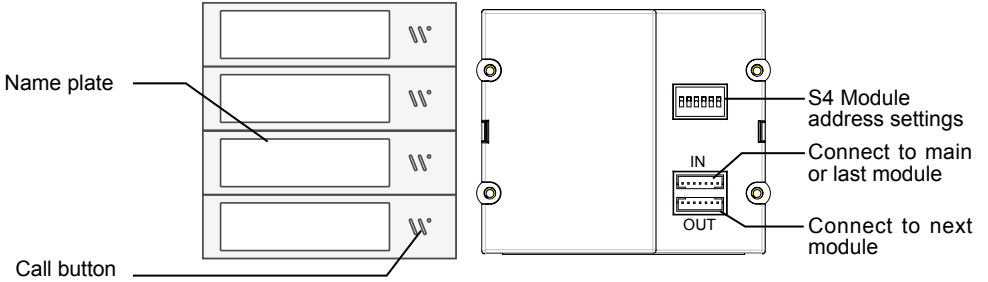Status_LED and Unlock_LED will light up means in backup.
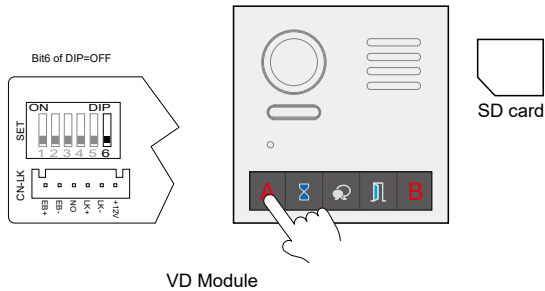
VD Module

Restore :

Make sure backup files is in SD card:

When bit6 of DIP is in OFF position on VD module, click a SD card, in 10s long press key B to restore backups in SD card.

Status_LED and Unlock_LED will light up means in restore.

VD Module

8. S4 Module

Name plate

S4 Module address settings

Connect to main or last module

IN

Connect to next module

OUT

Call button

Call codes

The DT821 automatically assigns the call codes to the connected module's buttons. Regardless of the structure of the call button module, the button numbers are listed from the bottom to top:

| Call Code	DIP State	Call Code	DIP State	Call Code	DIP State
\\\\04 \\\\03 \\\\02 \\\\01	ON 1 2 3 4 5 6	\\\\08 \\\\07 \\\\06 \\\\05	ON 1 2 3 4 5 6	\\\\12 \\\\11 \\\\10 \\\\09	ON 1234 5
\\\\16 \\\\15 \\\\14 \\\\13	ON 1234 5 6	\\\\20 \\\\19 \\\\18 \\\\17	ON 1234 5 6	\\\\24 \\\\23 \\\\22 \\\\21	ON 1234 5

Call Code	DIP State	Call Code	DIP State
\\28 \\27 \\26 \\25	ON ▮▮▮□□□ 1234 5 6	\\32 \\31 \\30 \\29	ON ▮▮▮□□□ 1234 5 6

Nametag and replace

Nametag area supports insert customized name card.

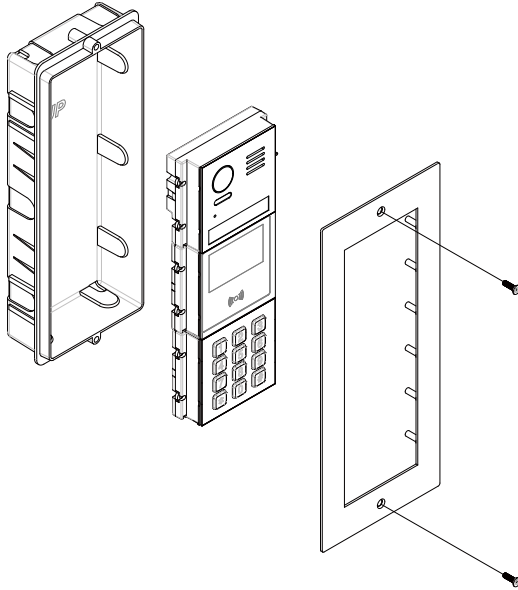The suggested card size is: 58 (L) x 11.7(W) mm.

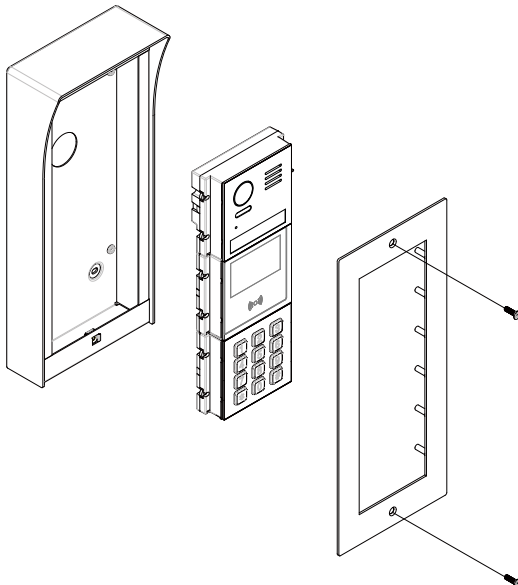To replace nametag, suck up the name tag via sucker cup as below
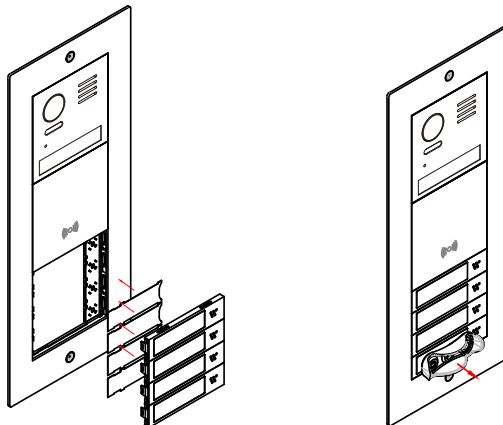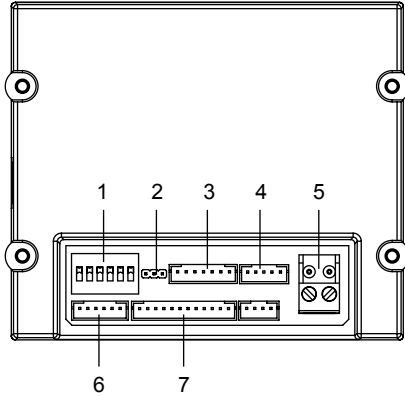
9. Module Mount

**FLUSH MOUNT**

SURFACE MOUNT

10. Terminal Description

• **VD module**

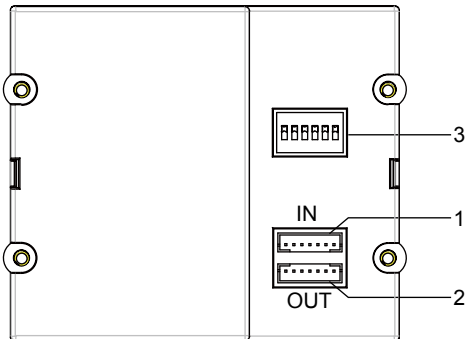| NO.	Name	Descriptions
1	SET	DIP switches for system configurations
2	JP-LK	For electronic lock safety type setting
3	CN/KMB	Call button module / Mechanical keypad module / DR module connection port
4	CN/T-COIL	Reserved
5	Bus	Non-polarity bus line,connect to power comb unit
6	CN-LK	Electric lock and exit button connection port
7	CN/FUN	TFT display module connection port

• MK and DR module
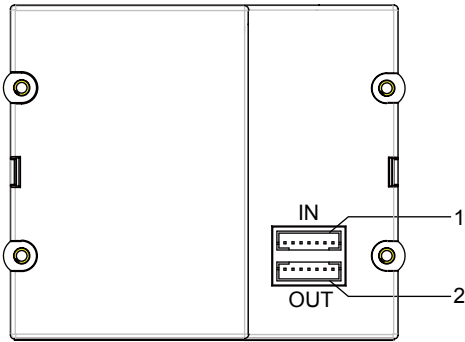
NO.	Name	Descriptions
1	CN/FUN_IN	Connect to CN/FUN of video entry module
2	CN/FUN_OUT	Connect to next keypad or TFT module

• S4 module

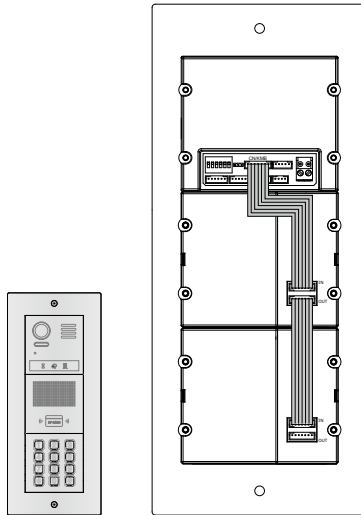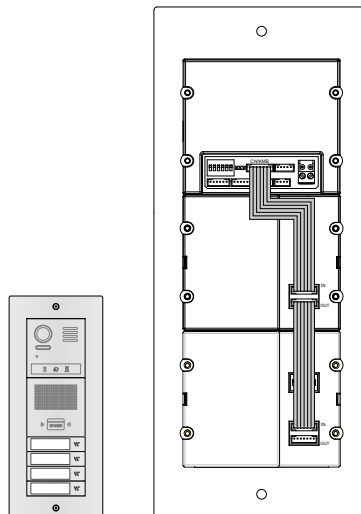| NO.	Name	Descriptions
1	CN/FUN_IN	Connect to CN/FUN of video entry module
2	CN/FUN_OUT	Connect to next keypad or TFT module
3	SET	DIP switches for system configurations

11. Connections
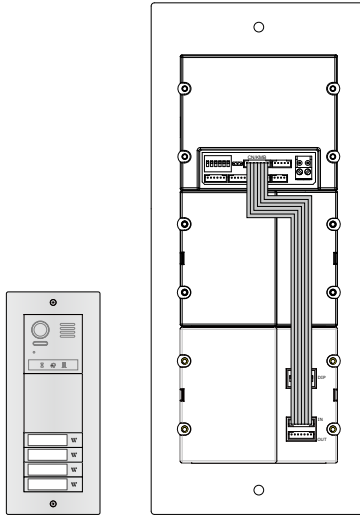
• VD and DR and MK module

• VD and DR and S4 module
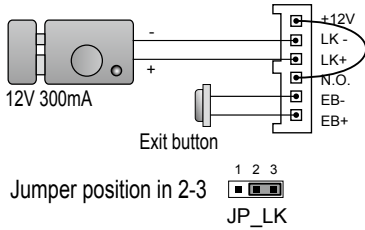
• **VD and BL and S4 module**

12. Electric Lock Connection

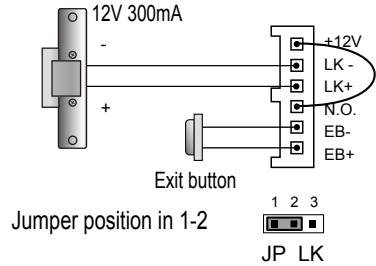## 1) Door Lock Controlled with Internal Power

1. The door lock is limited to 12Vdc, and holding current must be less than 250mA when using internal power supply mode.

2. The **Unlock Mode Parameter** must be set to 0 (by default).

3. Jumper set to 1-2 position for power-off-to-unlock safety type(*Normally closed mode*); set to 2-3 position for power-on-to -unlock type(*Normally open mode*).

4. If different unlocking time is needed,change the unlock time on door station,detail information refer to DT system technical guide .

Power-on-to-Unlock type: Power-off-to-Unlock type:

Power-on-to-Unlock type:
+12V
LK -
LK+
N.O.
EB-
EB+
12V 300mA
Exit button
Jumper position in 2-3
1 2 3
JP_LK

Power-off-to-Unlock type:
12V 300mA
+12V
LK -
LK+
N.O.
EB-
EB+
Exit button
Jumper position in 1-2
1 2 3
JP LK

2) Door Lock Controlled with External Power

1. The external power supply must be used according to the lock.

2. The jumper must be taken off before connecting.

3. Setup the **Unlock Mode Parameter** for different lock types
• Power-on-to-unlock type:Unlock Mode=0(by default)
• Power-off-to-unlock type:Unlock Mode=1

4. If different unlocking time is needed, change the unlock time on door station,detail information refer to DT system technical guide .
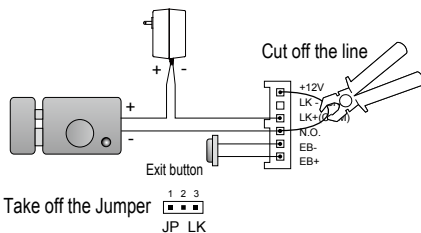
Power-on-to-Unlock type: Power-off-to-Unlock type:

Cut off the line
+12V
LK
LK+
N.O.
EB-
EB+
Exit button
Take off the Jumper
1 2 3
JP_LK

Cut off the line
+12V
LK
LK+
N.O.
EB-
EB+
Exit button
Take off the Jumper
1 2 3
JP_LK